# COMMERCIAL SITE DEVELOPMENT PLANS

# Braley Road Assessor's Map 242, Parcels 137 Freetown, Massachusetts

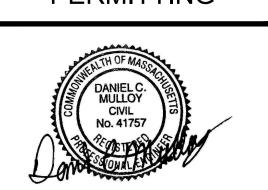
JUNE 18, 2018 REVISED: APRIL 15, 2021



FREETOWN , MASSACHUSETTS



**PERMITTING** 



COMMERCIAL DEVELOPMENT

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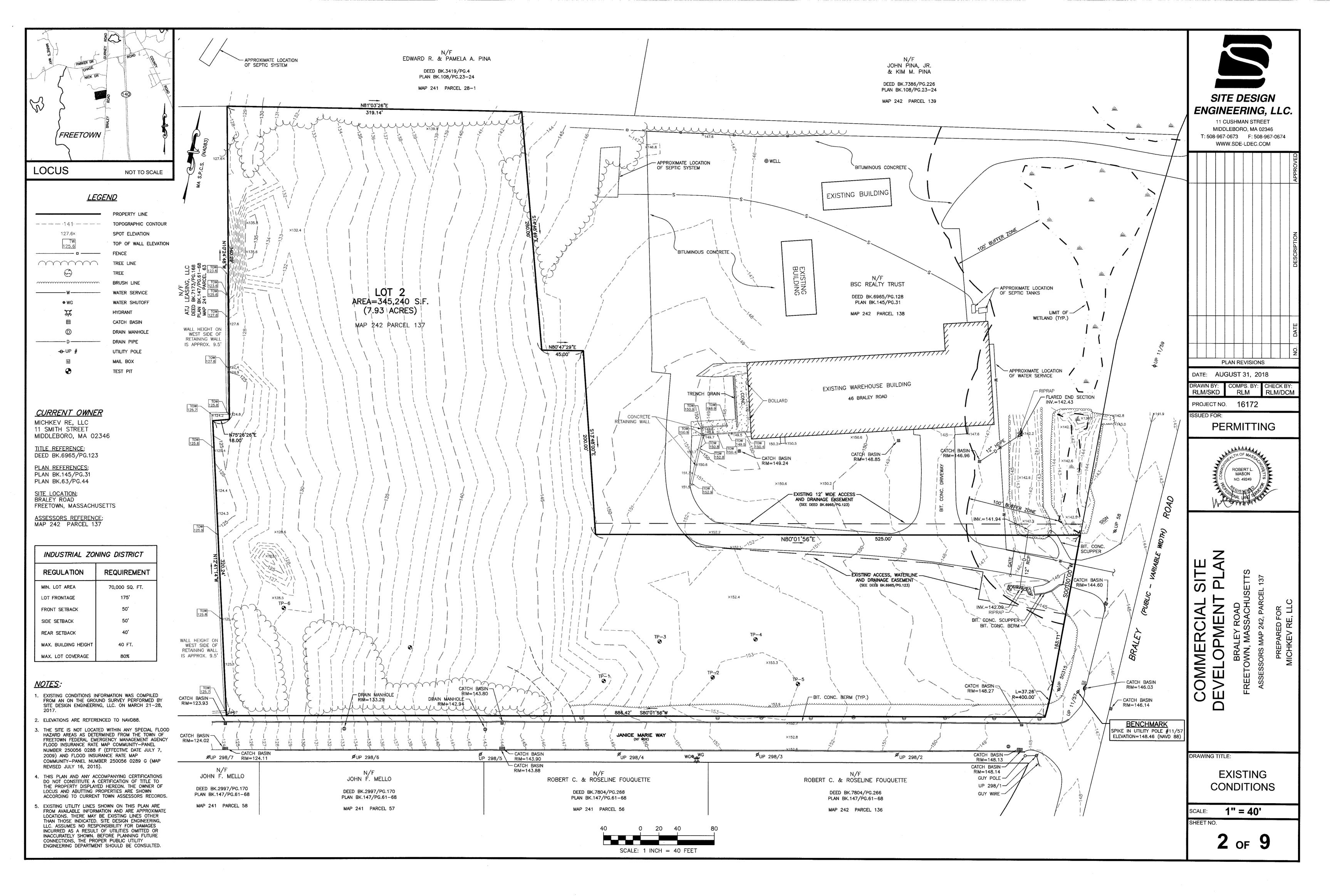
COVER

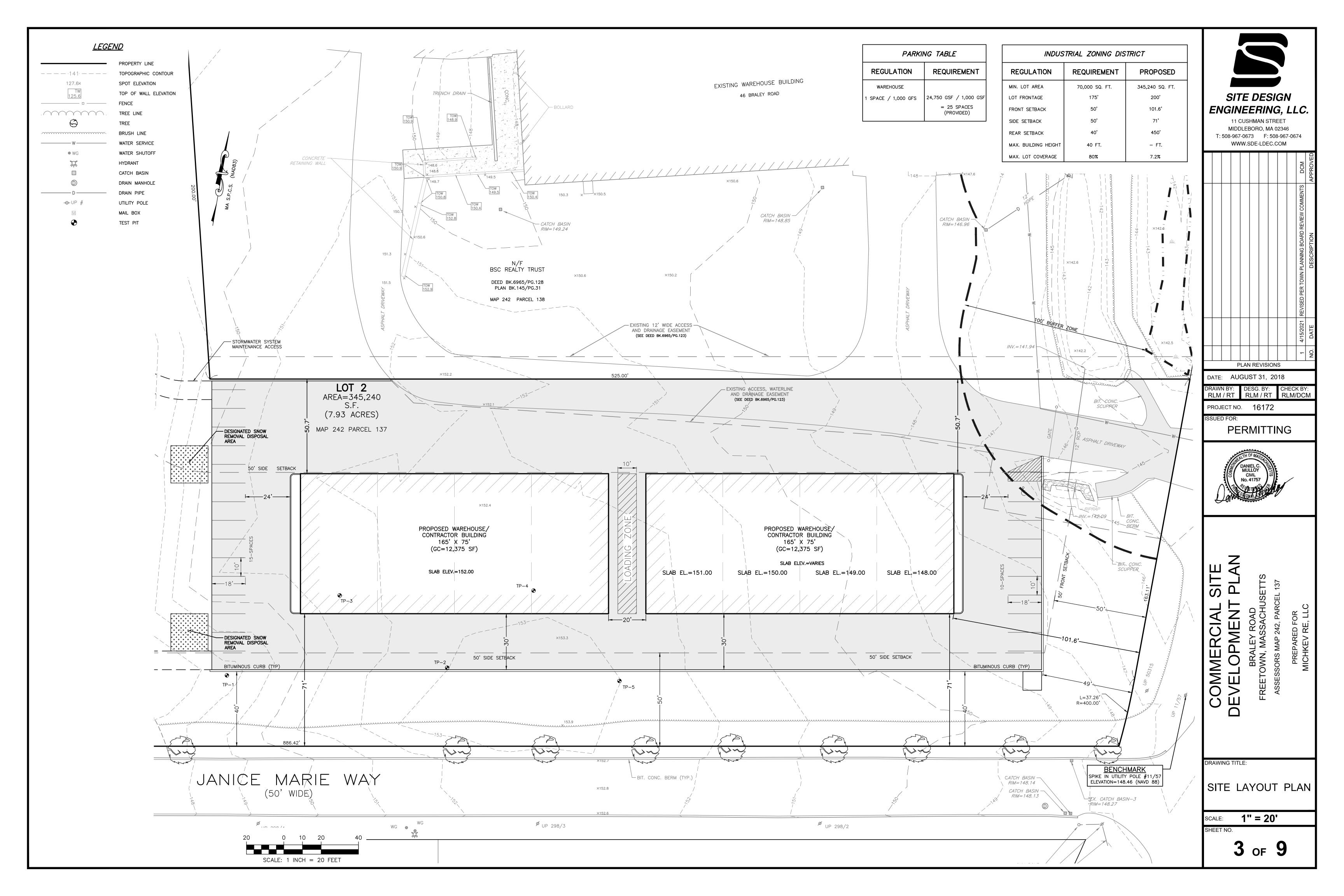
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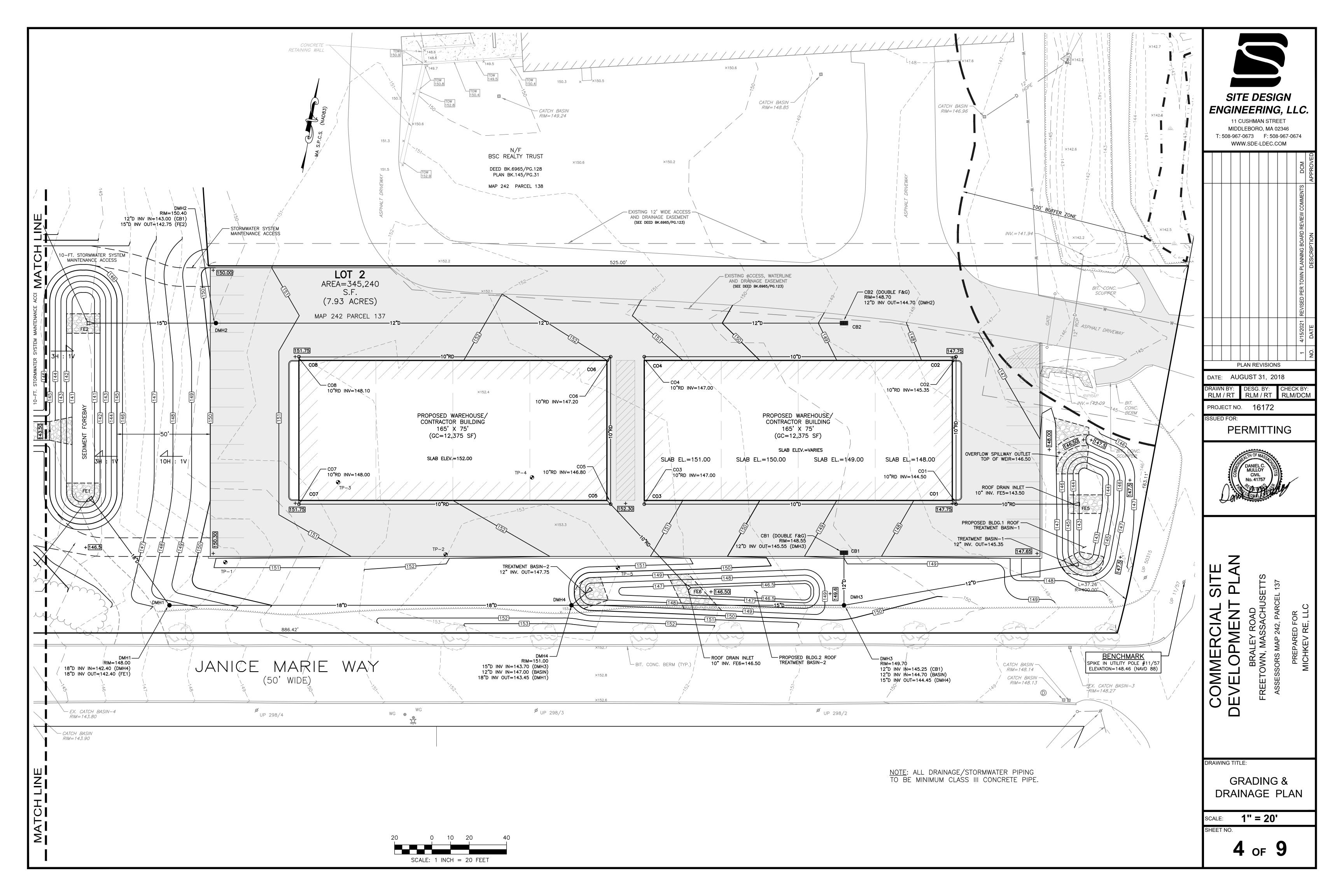
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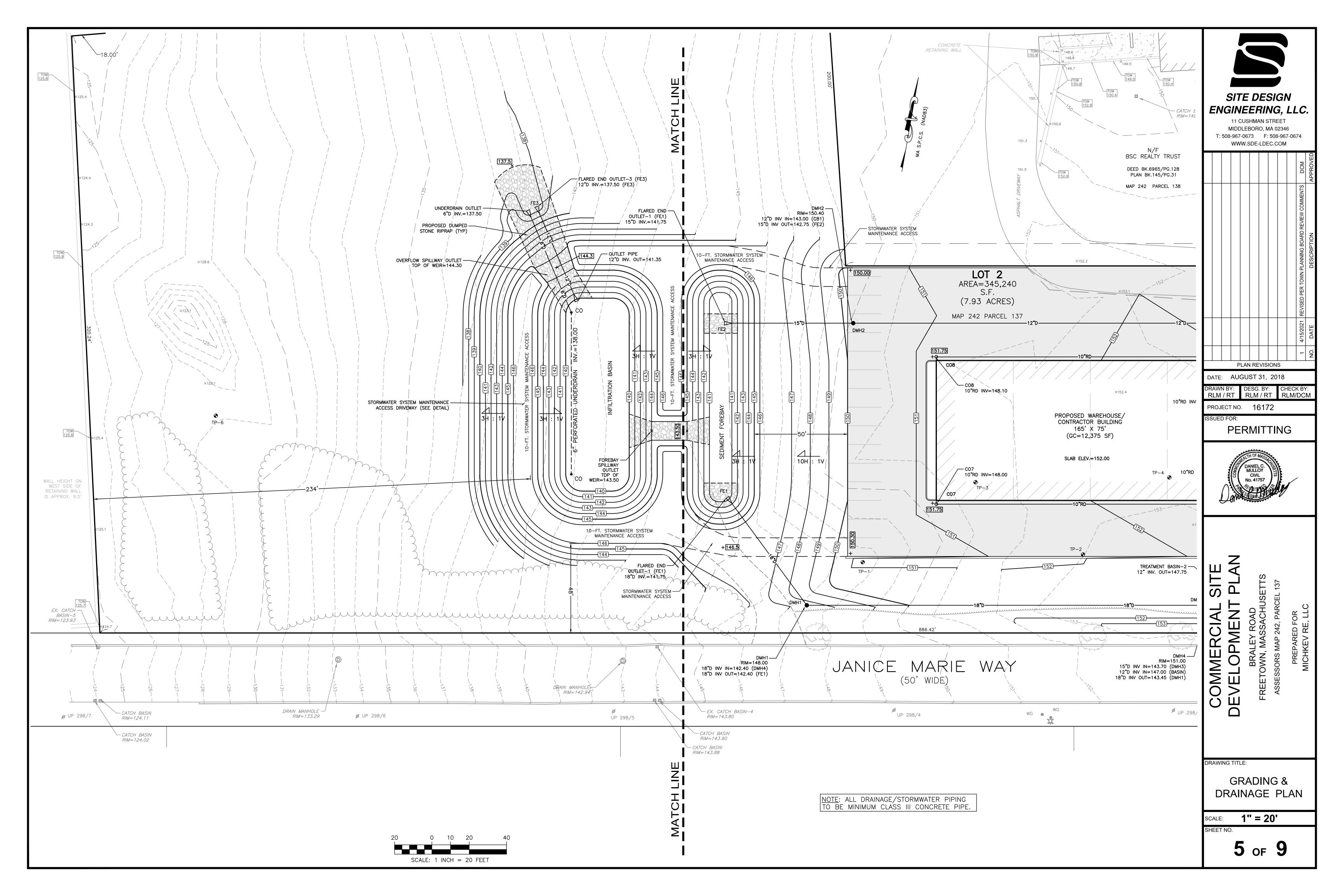
# PLAN INDEX

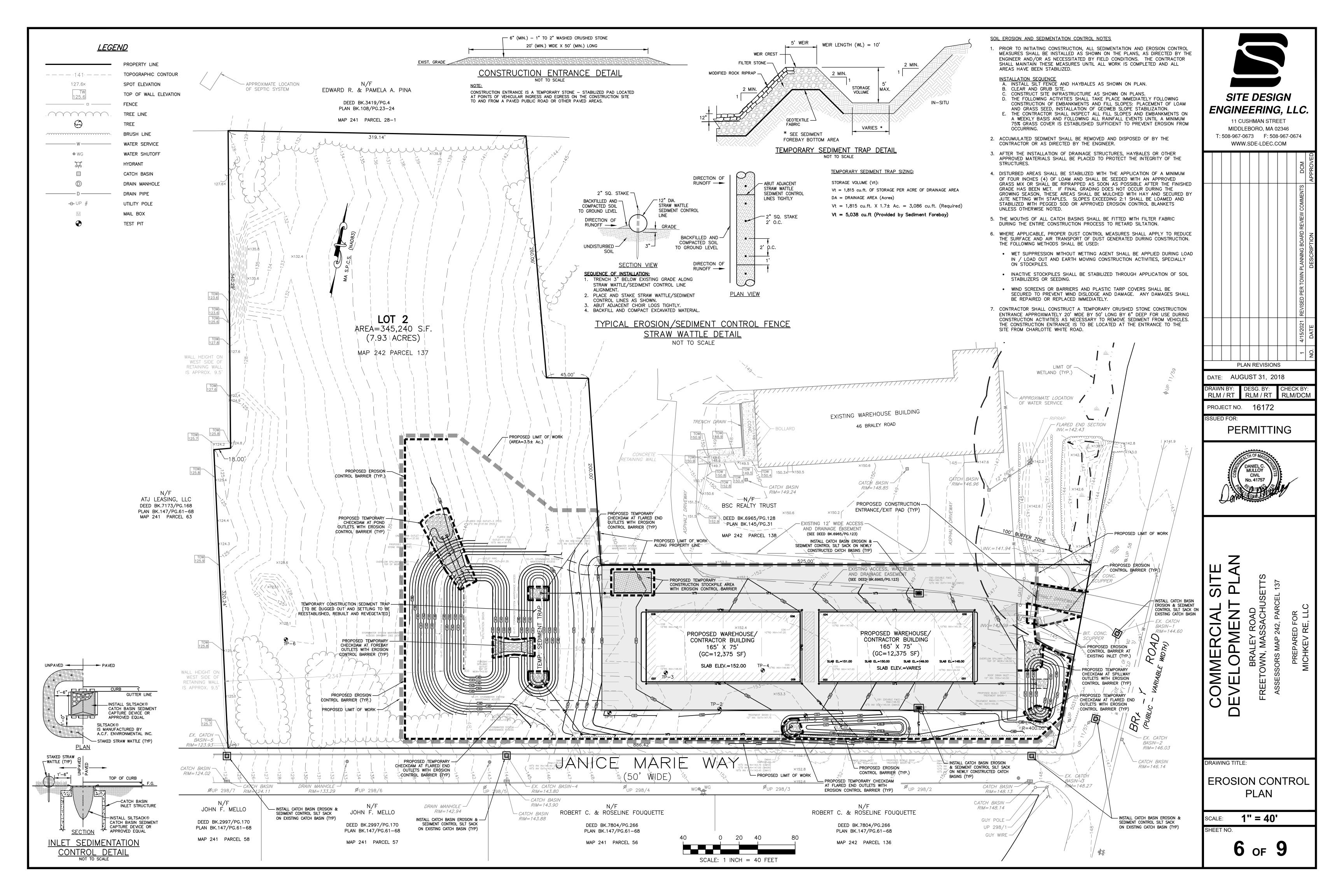
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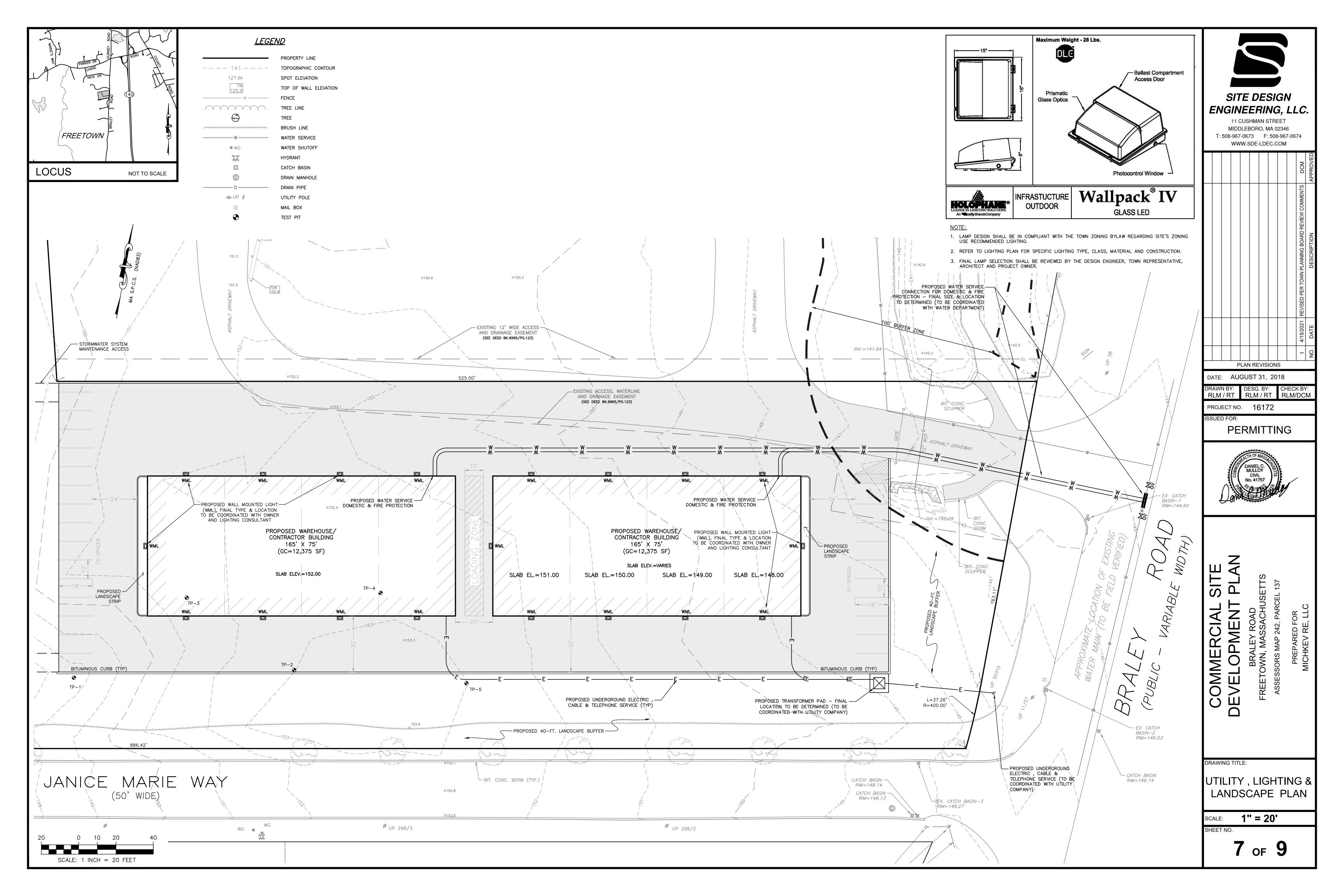












### **CONSTRUCTION NOTES:**

PRIOR TO ANY CONSTRUCTION.

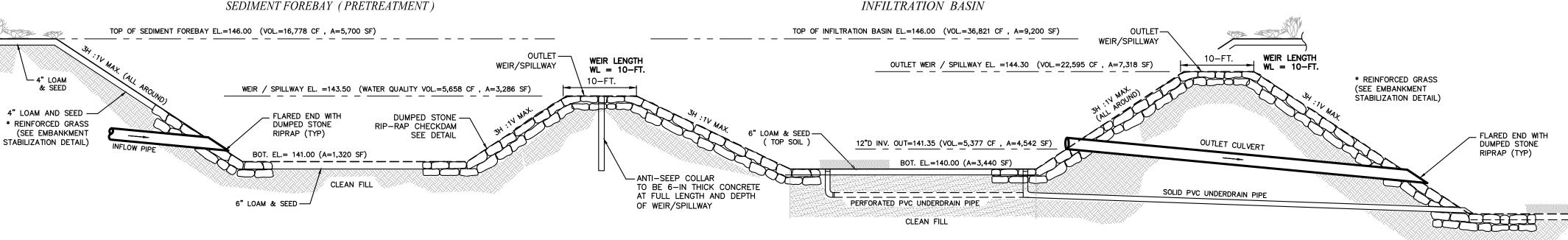
- THE LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES ARE APPROXIMATE ONLY. THE ENGINEER DOES NOT GUARANTEE THEIR ACCURACY OR THAT ALL UTILITIES AND SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY SIZE, LOCATION AND INVERT ELEVATIONS OF THE UTILITIES AND STRUCTURES, AS REQUIRED PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES WITH RECORD DATA SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR IS CAUTIONED TO CONTACT DIG SAFE (1-888-344-7233) 72 HOURS BEFORE DIGGING.
- ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, TRENCH EXCAVATION SAFETY REQUIREMENTS, TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. TRENCH EXCAVATION PERMIT REQUIRED. THIS APPLIES TO ALL TRENCHES ON PUBLIC AND PRIVATE PROPERTY.
- ALL MATERIALS AND CONSTRUCTION PRACTICES SHALL BE IN CONFORMANCE WITH THE MOST CURRENT EDITIONS OF THE TOWN OF FREETOWN STANDARD SPECIFICATIONS, PLANNING BOARD RULES AND REGULATIONS, THE LATEST EDITION OF THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS (MDPW) CONSTRUCTION STANDARDS, AND THE MDPW STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, UNLESS OTHERWISE SPECIFIED BY LOCAL AUTHORITY OR THE ENGINEER. ALL MATERIALS AND WORK NOT MEETING THESE SPECIFICATIONS SHALL BE IMMEDIATELY REMOVED FROM THE SITE AT THE FULL EXPENSE OF THE CONTRACTOR.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS WORK WITH THE APPROPRIATE TOWN OF FREETOWN HIGHWAY & UTILITY DEPARTMENTS.
- THE APPLICANT WILL HAVE TO APPLY FOR A BUILDING PERMITS WITH THE DEPARTMENT OF INSPECTIONAL SERVICE
- THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ENGINEERING DIVISION AND SCHEDULING AN APPOINTMENT 48 HOURS PRIOR TO THE DATE WHEN THE UTILITIES WILL BE MADE AVAILABLE FOR AN INSPECTION OF WATER SERVICES, SEWER SERVICE, AND DRAINAGE SYSTEM INSTALLATION. THE UTILITY IN QUESTION SHALL BE FULLY EXPOSED FOR THE INSPECTOR TO VIEW; BACKFILLING SHALL ONLY TAKE PLACE WHEN THE TOWN'S INSPECTOR HAS GIVEN THEIR APPROVAL.
- THE APPLICANT WILL HAVE TO APPLY FOR STREET OPENING, SIDEWALK CROSSING, AND UTILITIES CONNECTING PERMITS WITH THE DEPARTMENT OF PUBLIC WORKS PRIOR TO ANY CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN ALL EXISTING AND NEWLY INSTALLED UTILITIES IN GOOD WORKING ORDER AND SHALL PROTECT THEM FROM DAMAGE AT ALL TIMES UNTIL THE WORK IS COMPLETED AND ACCEPTED BY THE
- THE WATER SUPPLY SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE TOWN OF FREETOWN WATER DEPARTMENT. CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH APPLICABLE PERMITS (TO BE OBTAINED BY THE CONTRACTOR). UNLESS DIRECTED OTHERWISE, ALL WATER PIPES SHALL BE INSTALLED

5' - 0" BELOW GRADE. APPROPRIATE THRUST BLOCKING SHALL BE INSTALLED.

- 10. THE SANITARY SEWER SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE TOWN OF FREETOWN SEWER DEPARTMENT. CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH APPLICABLE PERMITS (TO BE OBTAINED BY THE CONTRACTOR).
- ELECTRIC, GAS, TELEPHONE, AND CABLE TELEVISION UTILITY CONNECTIONS AND SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE RESPECTIVE UTILITY.
- 12. THE CONTRACTOR SHALL CONTACT THE LOCAL ELECTRIC COMPANY FOR CONSTRUCTION SPECIFICATIONS, STANDARDS AND RESPONSIBILITIES.
- 13. ALL DRAINAGE PIPES ARE TO BE CLASS-3 REINFORCED CONCRETE PIPE.
- 14. THE REMOVAL OR EVIDENCE OF EXISTING UNDERGROUND OIL OR FUEL TANKS THE TOWN OF FREETOWN FIRE DEPARTMENT AND BOARD OF HEALTH SHALL BE INFORMED AND NOTIFIED.
- THE CONTRACTOR SHALL UTILIZE ALL MEASURES AND MATERIALS NECESSARY TO ENSURE THE SAFETY OF ALL PERSONS AND PROPERTIES AT THE SITE DURING CONSTRUCTION. ALL EXCAVATIONS SHALL CONFORM TO CURRENT OSHA STANDARDS.
- DEWATERING OPERATIONS SHALL BE PROVIDED, IF REQUIRED; ALL DISCHARGE SHALL PASS THROUGH SEDIMENTATION CONTROL DEVICES TO PREVENT IMPACTS UPON WATER BODIES, BORDERING VEGETATED WETLANDS, DRAINAGE SYSTEMS AND ABUTTING PROPERTIES.
- 17. IT IS THE RESPONSIBILITY OF THE CONTRACTOR(S) TO RECORD IN NOTE FORM (PREFERABLY IN A SURVEY FIELD NOTEBOOK) THE LOCATION OF ALL UTILITIES INSTALLED WHEN SURVEYORS ARE NOT AT JOB SITE. THESE NOTES WILL BE UTILIZED FOR THE PREPARATION OF REQUIRED AS-BUILT PLANS.
- 18. THE CONTRACTOR(S) SHALL NOTIFY THE DESIGN ENGINEER AND OR SURVEYOR FOR PROPER LOCATION OF PROPOSED UTILITIES AND IMPROVEMENTS PRIOR TO CONSTRUCTION.
- 19. THE CONTRACTOR MUST PRESERVE ALL GRADE STAKES SET BY SURVEYORS.
- ALL TREE REMOVAL SHALL COMPLY WITH THE TOWN OF FREETOWN TREE ORDINANCE
- THE STORMWATER MANAGEMENT SYSTEM OPERATIONS AND MAINTENANCE PLAN UPON ADOPTION BY THE APPLICANT AND OWNER MUST BE INCORPORATED IN THE DEEDS AND RECORDED AT THE BRISTOL REGISTRY OF DEEDS. A COPY OF THE RECORDING INSTRUMENT SHALL BE SUBMITTED TO THE ENGINEERING DIVISION.
- PRIOR TO OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN SHALL BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND IN HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES AND FINAL GRADES, ANY EASEMENTS AND FINAL GRADING.
- 23. ALL SITE WORK BEING COMPLETED BEFORE A CERTIFICATE OF OCCUPANCY CAN BE ISSUED.
- 24. THE CONTRACTOR SHALL GIVE SEVEN (7) DAYS' NOTICE TO PERTINENT TOWN DEPARTMENTS BEFORE COMMENCING WORK IN THE FIELD.

### STORMWATER FACILITY OPERATION AND MAINTENANCE

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ALL STORMWATER FACILITIES UNTIL SUCH TIME AS THE ROADWAYS AND ASSOCIATED UTILITIES ARE ACCEPTED BY THE OWNER.
- ALL STORMWATER FACILITIES SHOULD BE INSPECTED AFTER EVERY MAJOR RAINFALL EVENT FOR THE FIRST 3 MONTHS AFTER CONSTRUCTION TO ENSURE PROPER STABILIZATION AND CONSTRUCTION.
- THE CONTRACTOR SHALL INSPECT AND CLEAN ALL FACILITIES OF SEDIMENT AND DEBRIS PRIOR TO THE OWNER'S
- . ACCUMULATED SILT AND SEDIMENT SHOULD BE REMOVED FROM ALL FACILITIES AT LEAST ONCE A YEAR OR MORE FREQUENTLY IF ACCUMULATED DEPTH OF SEDIMENT EXCEEDS THREE INCHES.
- ALL REMOVED SEDIMENTS ARE TO BE PROPERLY DISPOSED AT A LOCATION TO BE APPROVED BY THE BOARD OF HEALTH. TRANSPORTATION AND DISPOSAL OF SEDIMENTS SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
- ANY DEFICIENCIES NOTED DURING MAINTENANCE SHALL BE REPORTED TO THE OWNER AND CORRECTED IMMEDIATELY.
- CONNECTION TO THE MUNICIPAL DRAINAGE SYSTEM REQUIRES A CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION AND WITNESSED BY THE ENGINEERING DIVISION PRIOR TO APPROVAL OF THE BUILDING PERMIT. POST-CONSTRUCTION CCTV INPECTION SHALL ALSO BE PERFORMED AND WITNESSED.
- DEWATERING OPERATIONS SHALL BE PROVIDED, IF REQUIRED; ALL DISCHARGE SHALL PASS THROUGH SEDIMENTATION CONTROL DEVICES TO PREVENT IMPACTS UPON WATER BODIES, BORDERING VEGETATED WETLANDS, DRAINAGE
- . THE STORMWATER MANAGEMENT SYSTEM OPERATIONS AND MAINTENANCE PLAN UPON ADOPTION BY THE APPLICANT AND OWNER MUST BE INCORPORATED IN THE DEEDS AND RECORDED AT THE BRISTOL REGISTRY OF DEEDS. A COPY OF THE RECORDING INSTRUMENT SHALL BE SUBMITTED TO THE ENGINEERING DIVISION.

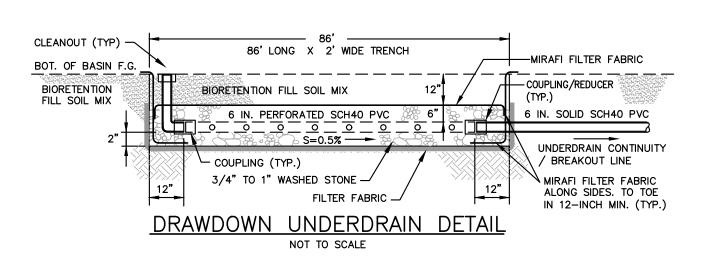


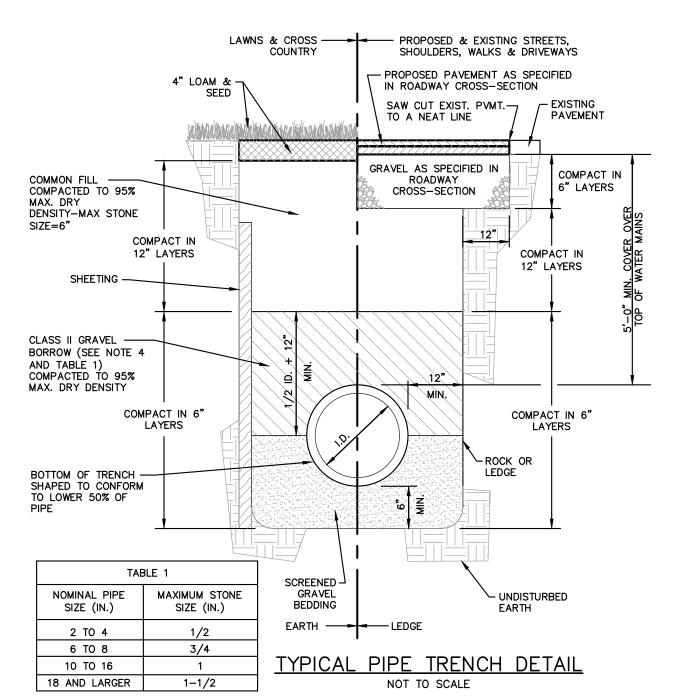
CRUSHED STONE

GRAVEL

STORMWATER STORAGE & RECHARGE SYSTEM DETAIL

	<u>BRALEY</u>	<u>ROAD</u>
PROPOSED PO	ST CONSTRUCTION DRAINAGE SYS	TEM OPERATIONS AND MAINTENANCE PLAN
ВМР	INSPECTION	MAINTENANCE
1. DEEP SUMP CATCH BASINS W/ HOODS	INSPECT IN THE SPRING AND FALL FOR SEDIMENT ACCUMULATION.	REMOVED SEDIMENT WHEN DEPTH EXCEEDS 12 INCHES. REMOVE FLOATABLES WHEN DEPTH EXCEEDS 4 INCHES.
2. SEDIMENT FOREBAY	INSPECT MONTHLY, AND AFTER 2 INCH RAINFALL EVENTS.	MAINTAIN FOUR TIMES PER YEAR AND WHEN SEDIMENT DEPTH IS BETWEEN 3 TO 6 FEET.  MAINTAIN VEGETATIONS, RESEED ANY ERODED & DESTABILIZE EMBANKMENT AREAS. REESTABLISH & STABILIZE EMBANKMENTS AS NEEDED.  REMOVED ACCUMULATED SEDIMENT AND DEBRIS FROM THE BASIN.  MOW SIDE AND BOTTOM AT LEAST TWICE ANNUALLY. KEEP GRASS HEIGHT BETWEEN 4 TO 6 INCHES.
3. INFILTRATION BASIN	INSPECT A MINIMUM OF TWICE A YEAR AND AFTER EVERY MAJOR RAINFALL EVENTS.	REMOVED ACCUMULATED SEDIMENT AND DEBRIS FROM THE STRUCTURE.  REMOVED ACCUMULATED SEDIMENT, DEBRIS, AND ACCUMULATED ORGANIC MATTER FROM THE BASIN.  MOW SIDE, BOTTOM, AND BUFFER AREA AT LEAST TWICE ANNUALLY. KEEP GRASS HEIGHT BETWEEN 4 TO 6 INCHES.





- 1. SHEETING IF USED, IN ALL CASES SHALL BE LEFT INPLACE BELOW A LINE 1'-0" ABOVE THE TOP OF
- THE PIPE. UNLESS OTHERWISE INDICATED OR DIRECTED 2. "COVER" AT ANY POINT SHALL BE DEFINED AS THE VERTICAL DISTANCE FROM THE UNDERMOST POINT OF THE PIPE TO A LINE WHICH CONNECTS THE SURFACE OF UNDISTURBED GROUND AT EITHER

SIDE OF THE TRENCH AND IS AT RIGHT ANGLES TO THE DIRECTION OF THE PIPE.

- 3. SCREENED GRAVEL SHALL BE HARD, DURABLE, ROUNDED PARTICLES, FREE FROM SAND, LOAM, CLAY EXCESS FINES AND DELETERIOUS MATERIAL, UNIFORMLY GRADED SUCH THAT NOT LESS THAN 95% WILL PASS A 1/2 INCH SIEVE AND NOT MORE THAN 5% PASS A NO. 4 SIEVE.
- 4. CLASS II GRAVEL BORROW SHALL BE A CLEAN, COARSE GRAINED GRAVEL-SAND MIXTURE. THE MIXTURE SHOULD CONTAIN LESS THEN 5% PASSING THE #200 SIEVE AS WELL AS COMPLYING TO THE REQIUREMENTS OF TABLE 1.

5. WHERE FUTURE EXTENSION OF A PLUGGED PIPE OR A PLUGGED BRANCH WILL ENTAIL ROCK EXCAVATION. TRENCH EXCAVATION IN ROCK SHALL BE EXTENDED FOR A DISTANCE OF 5'-0" BEYOND

#### INTO SURROUNDING 4" LOAM & SEED -SEDIMENT FOREBAY-1 & INFILTRATION BASIN — GRADE ¬ 3:1 MAX BLEND RIPRAP INTO SURROUNDING GRADE ( E RIPRAP MATERIAL PER SECTION B-B' MASSDOT STANDARDS RIPRAP OUTFALL 3'-0" <u>PLAN</u> FLARED END PIPE DIA. X 12 - SLOPE AS DUMPED STONE RIP-RAP (TYP) -REQ'D CONCRETE SPLASH BLOCK (3000 PSI, TROWEL FINISH) \* REINFORCED GRASS (SEE EMBANKMENT STABILIZATION DETAIL) USE BIORETENTION SEED MIX (TYP) BASIN OVERFLOW SPILLWAY OUTLET DETAIL NOT TO SCALE - CAREFULLY COMPACTED

BLEND RIPRAP

## ROCK GRADATION SIZE OF STONE | PERCENT(%) OF TOTAL WEIGHT SMALLER THAN THE GIVEN SIZE

## TYPICAL OUTLET PROTECTION DUMPED STONE RIP-RAP DETAIL

1. STONES SIZES ARE BASED UPON ASSUMED SPECIFIC WEIGHT OF 165 LBS./CF

2. DUMPED STONE RIP-RAP STONE SIZE AS PER MASSDOT

( INCHES )

6 TO 8

5 TO 7

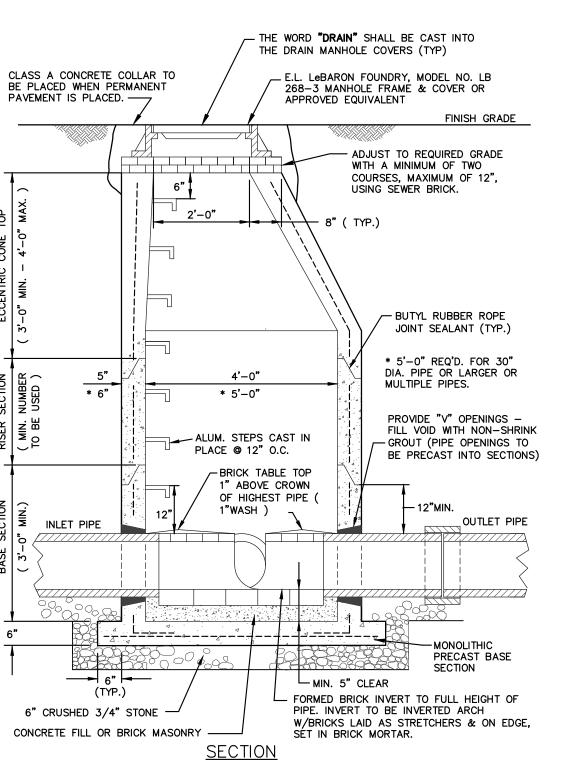
4 TO 6

1 TO 2

100

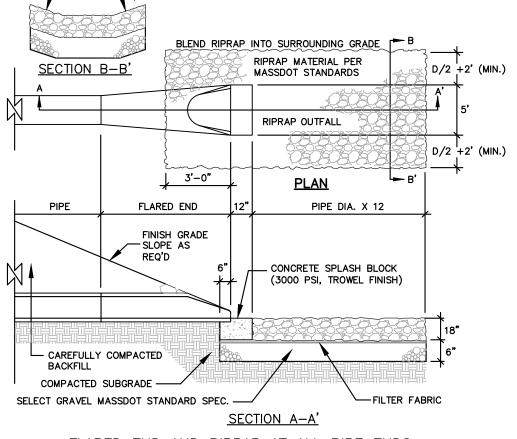
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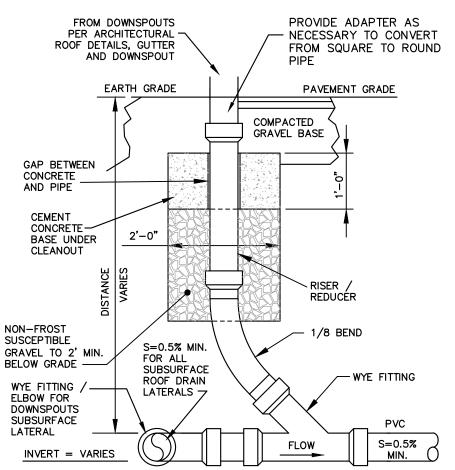
PRECAST CONCRETE DMH DETAIL NOT TO SCALE

1. PRECAST REINFORCED CONCRETE DESIGN SHALL BE CERTIFIED FOR H-20 LOADING. 2. USE FLAT TOP H2O LOADING SLAB WHEN HEIGHT OF CONE SECTION IS LESS THAN 2'-0". 3. FILL OUTSIDE FACE OF ALL MANHOLE JOINTS WITH NON-SHRINK MORTAR. 4. ALL JOINTS TO HAVE "KENT SEAL" OR EQUAL.

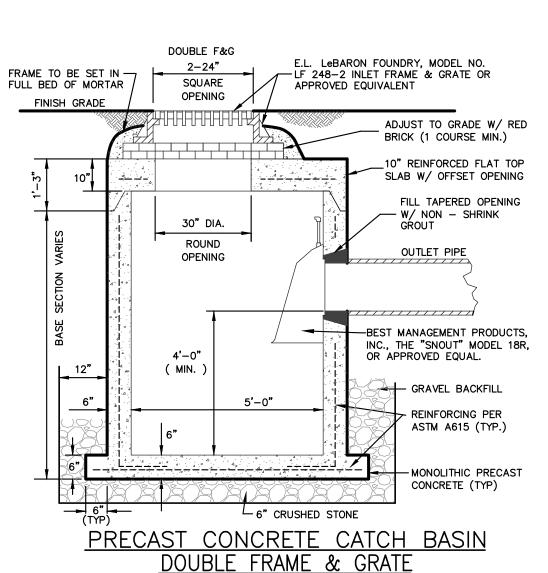


## FLARED END AND RIPRAP AT ALL PIPE ENDS

1.) RIP RAP SHALL CONFORM TO MASSACHUSETTS D.O.T. STANDARD SPECIFICATIONS.



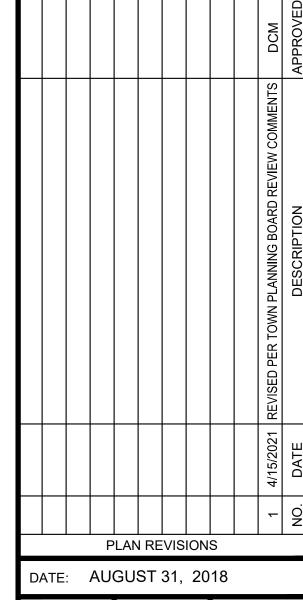
**DOWNSPOUT CONNECTION** & ROOF DRAIN DETAIL NOT TO SCALE



1. PRECAST REINFORCED CONCRETE DESIGN SHALL BE CERTIFIED FOR H-20 LOADING. 2. FILL OUTSIDE FACE OF ALL MANHOLE JOINTS WITH NON-SHRINK MORTAR. 3. ALL JOINTS TO HAVE "KENT SEAL" OR EQUAL.

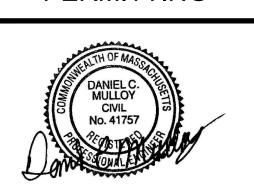


11 CUSHMAN STREET MIDDLEBORO, MA 02346 T: 508-967-0673 F: 508-967-0674 WWW.SDE-LDEC.COM



DESG. BY: RLM / RT RLM/DCM RLM / RT PROJECT NO. 16172

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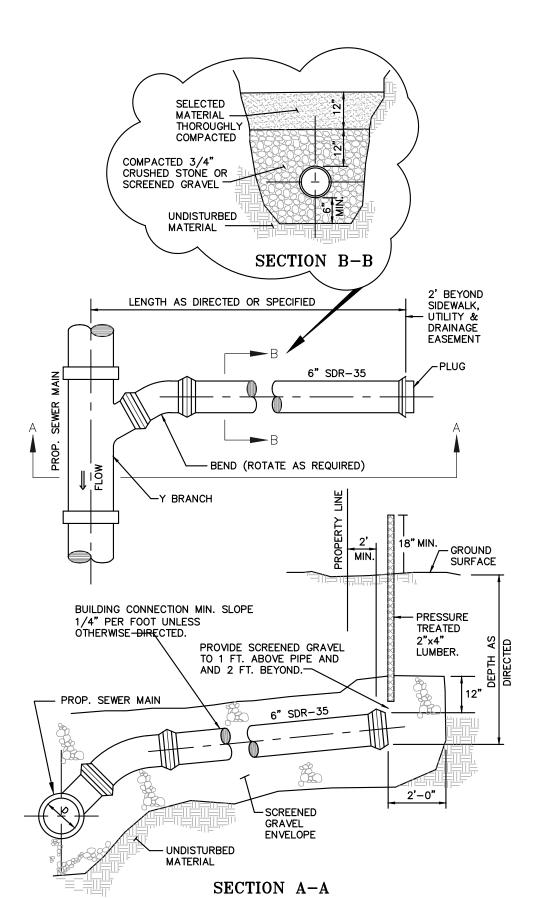
CONSTRUCTION **DETAILS** 

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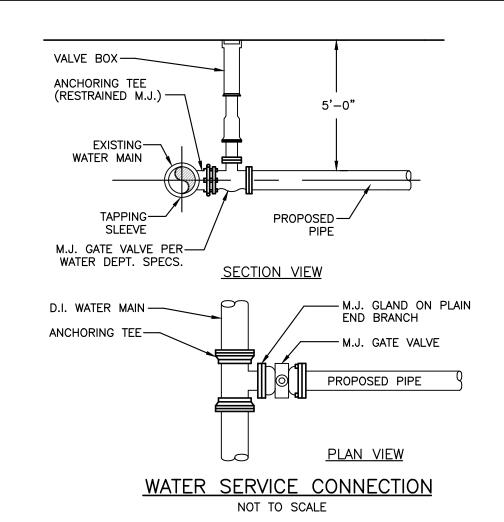
#### WATER CONNECTION CONSTRUCTION NOTES

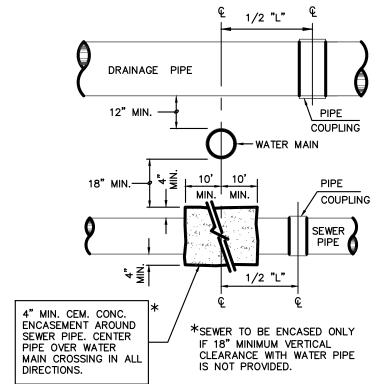
- 1. THE WATER SUPPLY SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE TOWN OF FREETOWN WATER DEPARTMENT. CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH APPLICABLE PERMITS (TO BE OBTAINED BY THE CONTRACTOR). UNLESS OTHERWISE DIRECTED, ALL WATER PIPES SHALL BE INSTALLED 5'-0" BELOW GRADE. APPROPRIATE THRUST BLOCKING SHALL BE INSTALLED.
- THE CONTRACTOR SHALL MAINTAIN CLEARANCE BETWEEN THE NEW WATER MAIN AND OTHER EXISTING UTILITIES OF AT LEAST (12) TWELVE INCHES OR AS DETERMINED BY THE TOWN'S WATER
- 3. ALL CONSTRUCTION METHODS AND MATERIALS, AS WELL AS ALL MATERIAL SHOP DRAWINGS AND MANUFACTURERS DATA SHALL RECEIVE THE WRITTEN APPROVAL OF THE TOWN OF FREETOWN WATER DEPARTMENT AND THE PROJECT ENGINEER PRIOR TO FABRICATION AND INSTALLATION.
- ALL COMPLETED SECTIONS OF THE PROPOSED SYSTEM SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH THE TOWN OF FREETOWN WATER DEPARTMENT SPECIFICATIONS. ANY PORTION OF THE WORK NOT MEETING THE REQUIRED TESTING STANDARDS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- FIRE FLOW TESTING IS REQUIRED FOR THE PROPOSED FIRE SUPPRESSION SYSTEM. TEST MUST BE COORDINATED WITH THE TOWN OF FREETOWN FIRE DEPARTMENT AND UTILITIES DIVISION. REPRESENTATIVES OF EACH DEPARTMENT SHALL WITNESS AND TEST RESULTS AND A WRITTEN REPORT SHALL BE SUBMITTED. HYDRAULIC CALCULATION SHALL BE PROVIDED TO THE TOWN'S FIRE DEPARTMENT FOR APPROVAL.
- 6. ALL WATER CONNECTIONS SHALL BE CHLORINATED AND PRESSURE TESTED IN ACCORDANCE TO AWWA AND THE TOWN OF FREETOWN CONSTRUCTION STANDARDS AND SPECIFICATIONS PRIOR TO OPENING THE CONNECTION TO EXISTING PIPES.
- APPROVAL OF THE FINAL CONFIGURATION OF THE WATER SERVICES SHALL BE DETERMINED BY THE UTILITIES DIVISION AND AN ENGINEER PREPARED FINAL PLAN APPROVED BY THE DIRECTOR
- 8. THE TOWN'S WATER SUPERINTENDENT AND THE PROJECT ENGINEER SHALL APPROVE ALL FIELD CHANGES IN THE WORK PRIOR TO IMPLEMENTATION. NO FIELD CHANGES SHALL BE MADE IN ANY SPECIFIED SITE WORK OR ANY MATERIALS FOR WHICH SHOP DRAWINGS HAVE BEEN SUBMITTED AND APPROVED WITHOUT PRIOR CONSULTATION OF THE WATER SUPERINTENDENT AND THE PROJECT ENGINEER. ANY CHANGES SO MADE WITHOUT THE CONSENT OF THE WATER SUPERINTENDENT AND THE PROJECT ENGINEER SHALL, IF DEEMED UNACCEPTABLE BY EITHER PARTY, BE PROMPTLY REMOVED FROM THE WORK AT NO EXPENSE TO THE OWNER OF THE
- THE CONTRACTOR SHALL INTERRUPT WATER SERVICE AND DISRUPT THE NORMAL FUNCTIONING OF THE DISTRIBUTION SYSTEM AS LITTLE AS POSSIBLE. THE CONTRACTOR SHALL NOTIFY THE TOWN'S WATER DEPARTMENT 72 HOURS IN ADVANCE OF ANY REQUIREMENT FOR UNWATERING OF ISOLATING A SECTION OF THE MAIN.
- 10. IN THE EVENT THAT NORMAL WATER SERVICE WILL BE INTERRUPTED FOR AN EXTENDED PERIOD, THE CONTRACTOR SHALL PROVIDE TEMPORARY SERVICE LINES.
- 11. THE CONTRACTOR SHALL NOT OPERATE WATER DISTRIBUTION SYSTEM VALVES WITHOUT THE SUPERVISION OF THE WATER DEPARTMENT. IF SUCH SUPERVISION IS PROVIDED BY THE OWNER, AT TIMES OTHER THAN DURING REGULAR WORKING HOURS OF THE WATER DEPARTMENT, THE CONTRACTOR SHALL REIMBURSE THE WATER DEPARTMENT FOR ALL SALARY EXPENSES INCURRED BY THE WATER DEPARTMENT IN PROVIDING SUCH SUPERVISION.



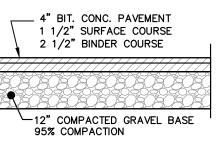
**BUILDING SEWER CONNECTIONS** FOR P.V.C. PIPE

NOT TO SCALE





SEWER, WATER & DRAIN CROSSING DETAIL



#### <u>TYPICAL BITUMINOUS</u> CONCRETE PAVEMENT NOT TO SCALE

TYPICAL ROADWAY CONSTRUCTION MATERIAL NOTES BITUMINOUS CONCRETE SHALL CONFORM TO MASSACHUSETTS HIGHWAY

DEPARTMENT SPECIFICATION M3.11.00. 2. GRAVEL BORROW TYPE C SHALL CONFORM TO MASSACHUSETTS

HIGHWAY DEPARTMENT SPECIFICATION M1.03.00 AS LISTED BELOW:

GRAVEL BORROW SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE AND COARSE SAND, FREE FROM LOAM AND CLAY, SURFACE COATINGS AND DELETERIOUS MATERIALS. GRADATION REQUIREMENTS FOR GRAVEL SHALL BE DETERMINED BY AASHTO-T11 AND T27 AND SHALL CONFORM TO THE FOLLOWING:

SIEVE <u>DESIGNATION</u> 1/2 IN NO. 4 NO. 50 NO. 200	PERCENT <u>PASSING</u> 50-85 40-75 8-28 0-10	MAXIMUM SIZE OF STONE IN GRAVEL SHALL BE 2 INCHES LARGEST DIMENSION	
	_		

O ELECTRICAL CONDUIT SEE NOTE #3 2 BASE SPACER TELEPHONE CONDUIT 4" TYPE DB-60 PVC SEE NOTE #4 -4" TYPE EB-20 PVC **ELECTRIC & TELEPHONE** 

(1) BACKFILL TO BE FREE OF STONES GREATER THAN ONE INCH AND SHALL NOT CONTAIN

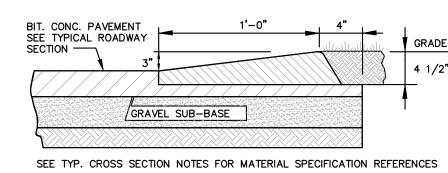
PRIMARY SERVICE DETAIL

ASHES, CINDERS, SHELL, OR FROZEN MATERIAL. (2) WARNING TAPE TO BE PLACED 12" BELOW FINISH GRADE AND DIRECTLY ABOVE POWER CONDUIT.

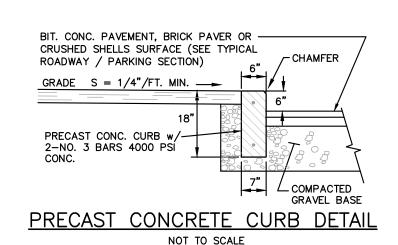
(3) MINIMUM SEPARATION BETWEEN ELECTRICAL CONDUIT AND FOREIGN CONDUIT OR PIPES IS AS FOLLOWS: COMMUNICATION - 3" OF CONCRETE ENCASEMENT WATER, GAS, SEWER - 12" WHERE THE PATH OF THESE UTILITIES INTERSECT AT APPROXIMATELY RIGHT ANGLES

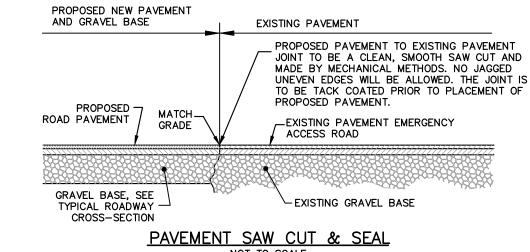
WITH STANDARD 0211.

24" SEPARATION SHALL BE MAINTAINED BETWEEN PARALLEL PLACEMENT OF THESE UTILITIES AND ELECTRICAL CONDUIT. BE 3 TO 6 INCHES. CONCRETE SHALL BE IN ACCORDANCE



BITUMINOUS CONCRETE BERM DETAIL NOT TO SCALE



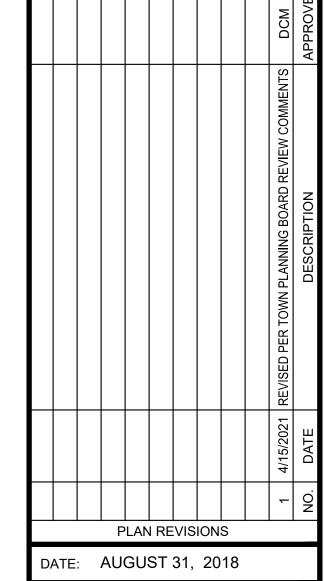


6" LOAM & SEED — -18" GRAVEL BORROW BASE COURSE 7 (2" MAX. STONE SIZE) EXISTING GROUND OR -M.D.P.W. SPEC. M1.03.0 COMPACTED BORROW

TYPICAL GRASS ACCESS DRIVEWAY SECTION STORMWATER SYSTEM MAINTENANCE ACCESS



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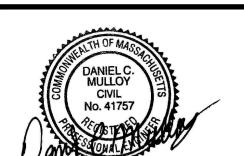


RLM / RT RLM / RT RLM/DCM

PROJECT NO. 16172

ISSUED FOR:

**PERMITTING** 



COMMERCIAL DEVELOPMEN

**DRAWING TITLE:** 

CONSTRUCTION **DETAILS** 

**NOT TO SCALE** 

SHEET NO.

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